

**REMARKS**

The above amendment and these remarks are responsive to the Office Action, designated as FINAL, of 25 May 2006 by Examiner Johnna Ronee Loftis.

Claims 1, 3-15, and 19-32 are in the case, none as yet allowed.

**35 U.S.C. 101**

Claims 1-32 have been rejected under 35 U.S.C. 101 as directed to non-statutory subject matter.

Applicants have canceled claims 2, and 16-18, without prejudice.

The Examiner finds the claims deficient as not being concrete for not fully describing the "complexity factor", resulting in the staffing requirements that are determined not being useful and not being tangible.

With respect to "complexity factor", applicant have

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amended the independent claims to more fully defining "complexity factor".

Applicants invention relates to processing of truck loads of electronic equipment of various complexities as that relates to demanufacturing. Those of ordinary skill in the art will readily understand that a lap top is less complex than a desk top, which is less complex than an IBM AS 400, which is less complex than an ABM System/360. They will recognize that it is within the skill of the art to determine that one type of equipment is more complex than another.

Careful precision is not required, but even at this gross level the complexity factor (defined as the work content multiplier [Specification, page 8, line 2]) is important and useful in the determination of staffing requirements.

Complexity level is related to the time it takes for an experience operator to tear down a particular piece of equipment to a point where the resulting components are reasonable to send out for recycling by a particular vendor, whose capabilities for recycling vary (by process and

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equipment resources). As will be apparent to those of skill in the art, a particular recycling vendor may have the capability to handle materials at a gross level, giving rise to a lesser complexity factor in the demanufacturing process, while another vendor may not have that capability and will only accept materials which have been broken down to a more discrete level, giving rise to a greater complexity factor in the demanufacturing process.

This explanation of "complexity" is taught by applicants, as follows:

"Anticipated equipment volumes can include such information as the type and number of units of equipment to be dismantled. When equipment of a certain type is received, experienced dismantlers disassemble at least one of that type to determine an equipment complexity factor in a process known as disassembly prototyping. Easily disassembled equipment types will have a relatively lower complexity factor, and equipment types that are difficult to disassemble will have a higher complexity factor. Salvageable and disposable content for a given equipment type will also be determined during disassembly prototyping. Higher

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salvageable content will indicate a higher complexity factor as care must be taken not to damage salvageable components during disassembly. Additional time must also be taken to properly store salvageable components rather than simply disposing of them. All of this information is then entered into a workload planning model, which calculates a workload forecast. Staffing requirements, with regard to both hiring and resource balancing between projects, can then be based on this forecast." [Specification, page 5, line 11 ff.]

Further, as those of skill in the art will recognize, complexity is related to actual person hours and truck load weight by the following described, and precisely stated relationships (actual person hours for a give customer/weight being defined after initial profiling by experience).

"An exemplary embodiment of the invention converts truck loads to pounds, and applies a complexity factor to generate person hours. Conversion of volume measure (pounds, truckload, machine, or pallet, etc.) to persons hours is accomplished by generating a profile for the customer based initially on prototype

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dismantling and thereafter as modified by experience,  
or actual history of hours/volume measure."

[Specification, page 11, lines 11-18.]

The Examiner finds the claim 5 step of determining  
salvageable and disposable content as subjective.  
Applicants traverse.

As previously noted, what is salvageable and disposable  
depends upon the capabilities of the recycling vendor, and  
as will be apparent to those of skill in the art, for a  
given vendor those capabilities are known. The copending  
application, S/N 09/524,366 describes how salvageable and  
disposable content is determined. See for example, the  
discussion for determining optimum level of demanufacturing  
at page 4, lines 14ff and page 10, lines 6-22. In the  
present application, this concept is described as follows:

"In step 22, the returns from new customers, or  
new equipment or materials from existing customers, are  
evaluated to establish a dismantle complexity factor.  
In a preferred embodiment of the invention, this is  
accomplished by systematically dismantling machines as  
prototypes, identifying the work content and resulting

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items (saleable items, commodities, trash, etc.) This data may then be input to the machine tear down model described in E. J. Grenchus, Jr. et al. S/N 09/524,366 (supra)." [Specification, page 8, lines 12-20.]

Thus, applicants assert, the invention produces a useful, concrete, and tangible result by determining staffing requirements based upon dismantling prototype machines, identifying work content and resulting items, to determine a complexity factor and productivity targets which are, with applicants teachings, of adequate precision and within the skill of those of ordinary skill in the art.

Applicants note the following relationships, which will be well understood by those of ordinary skill in the art:

(a) Dismantle time ( $T_d$ ) = function ( $f_1$ ) of Dismantle difficulty ( $D$ )

$T_d = f_1(D)$ , and

Dismantle difficulty ( $D$ ) = function ( $f_2$ ) of Dismantle time ( $T_d$ )

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$$D = f2 (Td)$$

- (b) Complexity factor (C) = function (f3) of Dismantle Time (Td)

$$C = f3 (Td)$$

- (c) Complexity factor for simple dismantle (Cs) < Complexity factor for difficult dismantle (Cd)

$$Cs < Cd$$

However, even more important than the above well understood relationships, is the following precise, exact, and absolutely definite definition of complexity factor:

- (d) Person hours (H) = Complexity factor example (Ce)  
\* volume (V),

$$Ce = H/V$$

where V is, for example, pounds, truckload, machine, or pallet.

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Thus, complexity factor (Ce) is precisely defined by the algorithm  $Ce = H/V$ . [Specification, page 11, lines 11-18.]

The above well understood relationships are brought out in applicants specification as quoted above and in the following, and represent to one of ordinary skill in the art a precise algorithm and clear criteria for understanding and generating a complexity factor (Ce) for establishing staffing requirements based, first, on disassembly prototyping, and thereafter based on experience.

"An exemplary embodiment of the invention converts truck loads to pounds, and applies a complexity factor to generate person hours. Conversion of volume measure (pounds, truckload, machine, or pallet, etc.) to persons hours is accomplished by generating a profile for the customer based initially on prototype dismantling and thereafter as modified by experience, or actual history of hours/volume measure."  
[Specification, page 11, lines 11ff.]

In the Response to Arguments section, the Examiner raises the following objection:

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"There is no predefined criteria or algorithm to determine a complexity factor in a concrete way. Applicant states that the complexity factor is related to the time it takes for an experienced operator to tear down a particular piece of equipment. However, this is not supported in the specification. The specification states that easily disassembled equipment will have a lower complexity factor. Here complexity seems related to difficulty, not time taken to disassemble." [Office Action, page 2.]

Applicants respectfully traverse the Examiners characterization of the specification as not supporting the time element of complexity, nor providing a definition of complexity factor. These are both clearly supported by the material quoted above from the specification at page 11, lines 11ff, and by the following statement:

"Higher salvageable content will indicate a higher complexity factor as care must be taken not to damage salvageable components during disassembly. Additional time must also be taken to properly store salvageable components..." [Specification, page 6, line 6.]

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Here "additional time" relates back to the "care", which clearly is a function of time.

Applicants now argue that applicants have described in the specification and amended the independent claims in such a manner as to provide specific "guidelines or criteria" for determining a complexity factor which is both "useful and concrete" [see Office action, page 2].

The Examiner also objects [Office action, page 3] to the subjectivity of determining salvageable and disposable contents, and requires that there needs to be concrete guidelines in place for determining salvageable and disposable content.

Applicants specification refers to this as follows:

"Salvageable and disposable content for a given equipment type will also be determined during disassembly prototyping." [Specification, page 5.]

"In step 22, the returns from new customers, or new equipment or materials from existing customers, are evaluated to establish a dismantle complexity factor.

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In a preferred embodiment of the invention, this is accomplished by systematically dismantling machines as prototypes, identifying the work content and resulting items (saleable items, commodities, trash, etc.) This data may then be input to the machine tear down model described in E. J. Grenchus, Jr. et al. S/N 09/524,366 (supra)." [Specification, page 8, lines 12ff.]

Copending application S/N 09/524,366, now U.S. Patent 7,054,824, describes the machine tear down model for determining salvageable and disposable content for the optimal level of demanufacturing. [See U.S. Patent 7,054,824, column 5., incorporated herein at page 1, line 9 of the present application.]

Thus, applicants assert, "concrete guidelines [have been provided by reference to U.S. Patent 7,054,824, and are] in place for determining salvageable and disposable content".

The rejection of claim 32 under 35 U.S.C. 101 has been withdrawn.

35 U.S.C. 112

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Claims 1-32 have been rejected under 35 U.S.C. 112, first paragraph, as not enabling.

Claims 2, and 16-18 have been canceled, and all remaining claims have been amended to define complexity factor.

In the context of this rejection, the Examiner again refers to the determination of the complexity factor and the determination of salvageable and disposable content. Applicants discussion above with respect to these determinations in the context of the rejection under 35 U.S.C. 101 also applies here.

Guidelines for determining salvageable and disposable content is provided by reference to U.S. Patent 7,054,824 where the material content which should be salvaged and which should be disposed of is described at Column 5.

Claims 1-32 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

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Claims 2, and 16-18 have been canceled, and all remaining claims have been amended to define complexity factor.

In the context of this rejection, the Examiner again refers to the determination of the complexity factor and the determination of salvageable and disposable content. Applicants discussion above with respect to these determinations in the context of the rejection under 35 U.S.C. 101 also applies here.

Guidelines for determining salvageable and disposable content is provided by reference to U.S. Patent 7,054,824 where the material content which should be salvaged and which should be disposed of is described at Column 5.

Claims 16-18 have been rejected under 35 U.S.C. 112, second paragraph, as being incomplete. Applicants have canceled claims 16-18 without prejudice.

#### SUMMARY AND CONCLUSION

Applicants urge that the above amendments be entered

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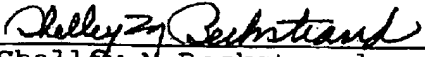
and the case passed to issue with claims 1, 3-15, 19-32.

The Application is believed to be in condition for allowance and such action by the Examiner is urged. Should differences remain, however, which do not place one/more of the remaining claims in condition for allowance, the Examiner is requested to phone the undersigned at the number provided below for the purpose of providing constructive assistance and suggestions in order that allowable claims can be presented, thereby placing the Application in condition for allowance without further proceedings being necessary.

Sincerely,

Edward J. Grenchus, Jr. et al.

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